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Weekly Bulletin

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Treatment of Poliomyelitis in Convalescent Stage

By John Ruhrah, M.D.

The acute stage is generally reckoned to the end of the tenderness on touching unless this should be unduly prolonged, as it is in some instances, and lasts through the period during which spontaneous improvement is supposed to take place; that is, for about two years. This is an important period, for in it the patient may be greatly helped or greatly harmed. The patient should be under medical supervision; and if there are State or city nurses visiting such cases, the patient should be on the list unless it is certain everything possible is being done, and there is a surprising and lamentable ignorance on this point. Many patients are neglected and horrible contractions and deformities result.

When to get the patient out of bed is a question on which there are differences of opinion, and each case must be considered on its own merits. From four to eight weeks' complete rest in bed are ordinary periods. Then, if there is not too much paralysis, the patient may be lifted out of bed into a chair. *The patient should never be allowed to fatigue himself.* At first the periods out of bed should be short and gradually increased according to the gain in strength. This getting up, if properly supervised, allows the bed to be aired, improves the nutrition, helps the mental side and allows the patient to be in the fresh air and sunshine if the circumstances permit. It also makes it easier for the patient to regain his balance if the legs are affected. It is always best to be on the safe side and proceed a little too slowly rather than a little too rapidly, but it should be remembered that mistakes may be made both ways and the patient kept in bed too long.

In severely paralyzed patients the getting up is preceded by propping up in bed, afterwards lifting them into a reclining chair—preferably one whose back can be raised to any angle.

Contractions are to be prevented from the outset by properly fitting casts or other appliances and by passive motions; that is, exercise done by the operator without effort on the part of the patient and also by stretching. Stretching is best done by an expert, as it is a matter requiring skill and knowledge. It hurts, but it hurts less the earlier it is done, and if neglected, leads to deformities requiring operations or may be beyond remedial aid.

The back should be remembered. Many times the legs are cared for and the arms neglected. Casts or corsets should be used if needed. Paralyzed arms should be kept from hanging down, as the constant stretching may destroy the shoulder muscles. In this, aeroplane splints which keep the arm at right angles to the body are usually employed.

Preventing contractions usually prevents deformities. Toe drop, foot drop and back deformities are the most common, but other varieties are only too frequent.

If the legs are involved, the time for the patient to walk will usually be from six months to a year after the onset, and some physicians advise at least a year's rest. In cases where there is great loss of power, braces are generally required. Learning to walk takes time and the patient should be prepared for this by telling him it will take time and much patience lest discouragement prevent his best efforts. The technique of teaching walking will be the subject of a later special article.

During all this period hydrotherapy, massage and passive exercises should be systematically carried out. Hot baths or the application of hot moist towels are useful for relieving tenderness and in rendering stretching more easy. Other forms of heat by electrical appliances may be used.

Massage is most useful in preventing atrophy of the muscles by maintaining the nutrition during the periods of imposed rest. It increases the flow of blood to the part and stimulates growth. It is best given by experts but if this is not possible, anyone of average intelligence may be taught sufficient to be useful. It is best done every other day at first and then daily, starting with a few minutes at a time and gradually lengthening the time until a half to three-quarters of an hour is used for the entire body. Do not fatigue the patient. It is better to err on the side of too little rather than too much. Warmth first and then massage is a good rule, and the parts should be covered and kept warm afterwards.

Electricity is often advised, but has no advantage over massage and should never be used except by an expert. In the hands of the ignorant—and but few are skilled in its application in treating these cases—it is capable of producing much pain and doing harm.

Muscle training is most important, but requires skilled operators. It may be given at home, but best results are obtained at some well-equipped institution. It is best given in warm water because the body is lighter and movements which can not be made in the air can be made in the water. This, too, will be the subject of a later article in this series.

The treatment during the convalescent stage consists of:

Constant medical supervision.
Rest.
Hydrotherapy.
The stretching of contractions.
The prevention of deformities.
Massage.
Muscle training by experts, best carried out in water.

Remember that the chances for improvement with expert daily treatment is 6 to 1; with supervised home exercises, 3.1 to 1; without supervision, 2.8 to 1. Figures from Lovett and Martin.

LESSON XI

BUREAU OF LABORATORIES

1. What type of laboratories are maintained by the State Department of Public Health?

The Bureau of Laboratories maintains laboratories for bacteriological and chemical analyses and also a laboratory for water examinations.

2. Is the bacteriological laboratory available to all communities of the State?

No. Its service is available only to the unincorporated areas of the State and to cities having populations of less than 20,000.

3. To whom is the service available?

To all physicians who may desire diagnostic examinations of specimens from individuals in whom communicable diseases are suspected.

4. For what diseases are such examinations commonly conducted?

Diphtheria, typhoid fever, syphilis, gonorrhoea, tuberculosis, malaria and many other diseases which are not encountered so commonly. Many thousands of such examinations are made every month in the bacteriological laboratory.

5. Are any vaccines distributed?

Yes. The bacteriological laboratory manufactures and distributes typhoid vaccine for free distribution to physicians.

6. Are any other products manufactured and distributed from the bacteriological laboratory?

Yes. Antigens and similar products which are used in other laboratories are manufactured and distributed at nominal cost.

7. Does the laboratory distribute material used in the prevention of blindness in babies?

Yes. Outfits containing two ampules of silver nitrate are manufactured in the laboratory and distributed free of charge to physicians and midwives for administration in the eyes of the newly-born for the prevention of ophthalmia neonatorum.

8. What field does the chemical laboratory cover?

Most of the work of the chemical laboratory is concerned with the examination of samples of foods and drugs to determine if they conform to the legal standards.

9. What are some of the products which are commonly subjected to chemical examination?

Jams, jellies, extracts, soft drinks, spices, condiments, vinegar, syrups, baking powder, meats and a wide variety of other products.

10. Are chemical examinations made of water supplies?

No, except as they may be necessary in the supervision of community supplies.

11. When can waters be examined in the State laboratory?

Only when there is reasonable ground to suspect that they are contaminated and may, through their use, cause illness in human beings.

12. Are any other products examined in the water examination laboratory?

Yes. Shellfish are examined in the course of official surveys of growing beds if they are suspected as the cause of illness.

13. What is the principal use of the water examination laboratory?

It is used principally for the benefit of purveyors of water supplies for the purpose of making bacteriological checks upon the quality of such supplies. It is available to all municipalities which need it.

14. Is it used also in connection with sewage disposal?

Yes. In the determination of adequate methods of sewage disposal. It is also used at frequent intervals to determine the efficiency of sewage disposal plants. Examinations of sewage are made whenever they are required by any community.

15. Why is the examination of water supplies in California particularly important?

Because most public water supplies in this State are drawn from surface streams and the liability of contamination is much greater than it would be if such supplies were taken from underground sources.

16. Is any other laboratory service provided through the State?

Yes. Through cooperation with the Hooper Foundation for Medical Research of the University of California Medical School, a large amount of research work is accomplished in the control of the more rare and important communicable diseases.

17. What diseases have been subjected to research work in this laboratory?

Psittacosis (parrot fever), relapsing fever, botulism, epidemic meningitis, epidemic poliomyelitis, shellfish poisoning (particularly from clams and mussels), and other diseases.

(Lesson XII will appear next week)

"The most ancient profession for women is the honorable art of nursing."

AFTER-CARE IN POLIOMYELITIS IS IMPORTANT

Dr. John Ruhrah, a noted pediatrician of the University of Maryland School of Medicine, Baltimore, was in California last year and talked upon the control and treatment of epidemic poliomyelitis. He appeared before medical and public health groups, expounding the best known procedures in the prevention of disabling handicaps resulting from this disease. He is well qualified to speak upon the subject, for he contracted the disease himself while on a trip to Europe in 1930. He was a patient at Warm Springs, Georgia, in 1931. In the June 9 issue of this publication an article upon the subject of poliomyelitis, by Dr. Ruhrah, was printed. Another article by the same author appears in this issue of the WEEKLY BULLETIN. It is believed that both of these articles are of exceptional value and may be of practical use at the present time.

TULARE COUNTY STARTS SQUIRREL ERADICATION

The supervisors of Tulare County have appropriated $25,000 to be spent for materials to use in an intensive campaign of ground squirrel eradication. The board has announced that salaries of county employees will not be raised during this fiscal year, but that the campaign against these rodents will be carried on persistently. County Agricultural Commissioner Hemphill will be in charge of the work, and he estimates that the $25,000 appropriation will provide materials for a year of work in the extermination of ground squirrels. Large numbers of infected rodents recently have been found in Tulare and Kern counties. The control of plague rests upon rodent extermination and Tulare County is to be congratulated upon its vigorous campaign to remove a distinct menace to the public health.

MORBIDITY*

Chickenpox

134 cases of chickenpox have been reported, as follows: Albany 1, Berkeley 9, Oakland 14, Pleasanton 1, Fresno County 1, Lassen County 2, Los Angeles County 2, Alhambra 1, Burbank 1, Glendale 2, Long Beach 1, Los Angeles 26, Pasadena 3, Redondo 1, San Gabriel 1, Whittier 1, Lynwood 1, South Gate 1, Madera 1, Sacramento 3, San Diego County 2, Coronado 1, San Diego 13, San Francisco 9, San Joaquin County 5, Lodi 1, Stockton 11, Paso Robles 1, San Luis Obispo 5, Menlo Park 6, Santa Barbara County 1, Santa Clara County 1, San Jose 1, Sierra County 1, Stanislaus County 2, Woodland 1.

Diphtheria

31 cases of diphtheria have been reported as follows: Alameda County 1, Bakersfield 1, Los Angeles County 2, Alhambra 1, Compton 1, Culver City 1, Los Angeles 16, San Gabriel 1, Nevada County 1, San Diego 1, San Mateo 1, Tulare County 1, Tulare 3.

German Measles

57 cases of German measles have been reported, as follows: Alameda County 1, Oakland 2, Humboldt County 1, Kern County 1, Los Angeles County 11, Alhambra 5, Burbank 1, Culver City 1, Glendora 1, Huntington Park 1, Long Beach 2,

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* Complete reports for the above diseases for week ending June 30, 1934.

Los Angeles 11, Pasadena 2, Pomona 1, San Fernando 1, Sierra Madre 1, Torrance 1, South Gate 1, Maywood 1, Yosemite 3, Orange County 1, Anaheim 1, Santa Ana 1, Riverside 1, San Diego 1, San Francisco 1, Lodi 1, Santa Barbara County 1.

Influenza

17 cases of influenza have been reported, as follows: Berkeley 1, Oakland 1, Los Angeles County 1, Los Angeles 10, Riverside County 1, San Bernardino County 1, San Francisco 1, Stanislaus County 1.

Malaria

8 cases of malaria have been reported, as follows: Kern County 2, Los Angeles 1, San Joaquin County 3, Ventura County 1, California 1.**

Measles

550 cases of measles have been reported, as follows: Alameda County 2, Albany 8, Berkeley 14, Emeryville 1, Oakland 31, Contra Costa County 1, Concord 2, Richmond 11, Walnut Creek 2, Fresno County 6, Fresno 8, Reedley 1, Humboldt County 1, Imperial County 2, Brawley 2, Bakersfield 1, Hanford 1, Los Angeles County 7, Alhambra 3, Burbank 3, Culver City 1, Glendora 1, Long Beach 5, Los Angeles 19, Pasadena 5, Pomona 1, Maywood 1, Bell 1, Marin County 1, San Rafael 8, Orange County 4, Brea 1, Orange 1, La Habra 10, Plumas County 1, Riverside County 1, Riverside 1, Sacramento County 1, Sacramento 4, San Bernardino County 2, Coronado 1, San Diego 1, San Francisco 189, San Joaquin County 11, Lodi 1, Manteca 1, San Mateo County 5, Burlingame 1, Redwood City 11, San Bruno 1, South San Francisco 2, Menlo Park 1, Santa Barbara County 9, Santa Barbara 2, Santa Clara County 27, Mountain View 1, Palo Alto 18, San Jose 20, Santa Clara 1, Willow Glen 1, Santa Cruz 2, Sierra County 11, Siskiyou County 1, Solano County 1, Benicia 1, Vallejo 5, Sonoma County 5, Stanislaus County 10, Modesto 2, Turlock 3, Ventura County 3, Fillmore 14, Santa Paula 1, Yolo County 5, Woodland 6.

Mumps

184 cases of mumps have been reported, as follows: Alameda County 2, Alameda 2, Berkeley 3, Emeryville 2, Hayward 1, Oakland 23, Pleasanton 1, San Leandro 1, El Cerrito 4, Richmond 1, Humboldt County 5, Imperial 1, Kern County 1, Los Angeles County 7, Alhambra 1, Burbank 1, Inglewood 2, Long Beach 3, Los Angeles 15, Whittier 1, Bell 1, Madera County 2, Marin County 1, Calistoga 1, Napa County 1, Napa 4, Orange County 1, Santa Ana 1, Plumas County 3, Riverside 1, Sacramento 7, Coronado 2, San Francisco 72, Stockton 3, Santa Clara County 5, Watsonville 1, Modesto 1.

Pneumonia (Lobar)

74 cases of lobar pneumonia have been reported, as follows: Alameda County 1, Livermore 1, Oroville 1, Martinez 1, Fresno County 2, Fresno 2, Imperial County 3, Brawley 3, Holtville 1, Bakersfield 1, Los Angeles County 2, Los Angeles 15, Madera 1, Sausalito 4, Mendocino County 1, Merced County 2, Monterey County 1, Napa County 1, Napa 1, Plumas County 1, Riverside County 1, Sacramento County 1, Sacramento 4, San Benito County 1, Colton 1, Needles 1, Redlands 1, El Cajon 1, San Diego 1, San Francisco 4, Santa Clara County 1, Watsonville 1, Shasta County 2, Redding 1, Santa Rosa 1, Stanislaus County 1, Tulare County 3, Porterville 1, Visalia 1, Fillmore 1.

Scarlet Fever

118 cases of scarlet fever have been reported, as follows: Alameda 1, Oakland 5, Colusa 1, Contra Costa County 2, Fresno County 1, Bakersfield 1, Kings County 2, Lassen County 1, Los Angeles County 25, Alhambra 1, Culver City 1, El Monte 1, Glendale 2, Los Angeles 29, Manhattan 1, Pasadena 2, Pomona 2, Santa Monica 1, South Gate 1, Gardena 1, Monterey County 2, Pacific Grove 1, Orange County 1, Anaheim 1, Fullerton 1, San Bernardino County 1, Redlands 3, San Diego County 1, San Francisco 2, San Joaquin County 4, Lodi 1, Redwood City 1, Santa Barbara County 1, Santa Barbara 2, Palo Alto 1, San Jose 3, Vallejo 1, Stanislaus County 1, Tulare County 1, Ventura County 3, Yolo County 3, Yuba County 2,

Smallpox

No cases of smallpox have been reported.

Typhoid Fever

18 cases of typhoid fever have been reported, as follows: Fresno County 1, Imperial County 3, Los Angeles County 3, Alhambra 1, Los Angeles 1, Sacramento 2, San Bernardino County 2, San Francisco 1, San Joaquin County 1, Lodi 1, Stockton 1, San Mateo County 1.

Whooping Cough

201 cases of whooping cough have been reported, as follows: Alameda County 2, Alameda 1, Berkeley 3, Oakland 4, Contra Costa County 1, El Dorado County 1, Fresno County 3, Brawley 2, Imperial 2, Kern County 1, Los Angeles County 23, Alhambra 1, Beverly Hills 4, Burbank 2, Compton 2, Glendale 1, Inglewood 2, Long Beach 4, Los Angeles 31, Pomona 2, San Fernando 3, San Gabriel 1, Santa Monica 3, Whittier 1, South Gate 1, Monterey Park 1, Madera 1, Yosemite 1, Mendocino County 2, Merced County 1, Monterey County 1, St. Helena 1, Orange County 4, La Habra 2, Placentia 8, Riverside County 3, Corona 1, Sacramento 2, San Bernardino County 1, National City 2, San Diego 22, San Francisco 8, San Joaquin County 8, Lodi 1, Stockton 3, San Luis Obispo 6, San Mateo County 1, Daly City 1, San Bruno 2, Santa Barbara County 3, Santa Barbara 2, Santa Maria 4, San Jose 2, Santa Cruz 1, Petaluma 1, Stanislaus County 2, Turlock 1, Ventura 1.

Dysentery (Amoebic)

4 cases of amoebic dysentery have been reported, as follows: Los Angeles 1, San Gabriel 1, Monterey 1, Santa Barbara 1.

Dysentery (Bacillary)

7 cases of bacillary dysentery have been reported, as follows: Imperial County 1, Long Beach 1, Los Angeles 2, Ukiah 1, Colton 1, San Diego 1.

Ophthalmia Neonatorum

One case of ophthalmia neonatorum from San Francisco has been reported.

Pellagra.

4 cases of pellagra have been reported, as follows: Los Angeles 1, Auburn 1, Redlands 1, San Francisco 1.

Poliomyelitis

299 cases of poliomyelitis have been reported, as follows: Alameda 4, Albany 1, Berkeley 10, Hayward 1, Oakland 13, Contra Costa County 3, El Cerrito 1, Fresno County 4, Fresno 12, Kern County 1, Los Angeles County 51, Alhambra 2, Culver City 1, Glendale 10, Glendora 1, Inglewood 1, Long Beach 2, Los Angeles 124, Manhattan 1, Montebello 2, Pasadena 1, Pomona 3, Santa Monica 3, South Gate 3, Monterey Park 1, Orange County 1, Sacramento 1, San Bernardino County 1, San Diego County 1, National City 2, San Diego 1, San Francisco 15, San Joaquin County 2, Burlingame 1, San Bruno 1, San Mateo 1, Santa Clara County 5, Palo Alto 1, San Jose 3, Sonoma County 1, Modesto 1, Tulare County 3, Ventura 1, California 1.**

Tetanus

One case of tetanus from Los Angeles has been reported.

Encephalitis (Epidemic)

2 cases of epidemic encephalitis have been reported, as follows: Sacramento 1, San Francisco 1.

Paratyphoid Fever

2 cases of paratyphoid fever from Imperial County have been reported.

Plague (Bubonic)

One case of bubonic plague from Tulare County has been reported.

Rocky Mountain Spotted Fever

One case of Rocky Mountain spotted fever from Lassen County has been reported.

Food Poisoning

One case of food poisoning from Taft has been reported.

Undulant Fever

2 cases of undulant fever have been reported, as follows: Burbank 1, San Diego 1.

Tularemia

One case of tularemia from Merced County has been reported.

Coccidioidal Granuloma

3 cases of coccidioidal granuloma from Los Angeles have been reported.

Septic Sore Throat (Epidemic)

8 cases of epidemic septic sore throat have been reported, as follows: San Francisco 5, San Mateo 1, South San Francisco 1, Sutter County 1.

Rabies in Animals

18 cases of rabies in animals have been reported, as follows: Los Angeles County 1, Alhambra 1, Burbank 2, Los Angeles 10, Orange County 1, San Diego 3.

** Cases charged to "California" represent patients ill before entering the State or those who contracted their illness traveling about the State throughout the incubation period of the disease. These cases are not chargeable to any one locality.

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